

**FREQ. STABILITY vs. TEMP. RANGE**

Temp.(°C)	Freq Stab/ Tolerance/ Pulling	M: ± 25/ ± 15/ ± 100	G: ± 35/ ± 20/ ± 100	R: ± 50/ ± 20/ ± 150	T: ± 25/ ± 15/ ± 150	K: ± 50/ ± 20/ ± 200
C	-20~ +70	△	○	○	△	○
D	-30~ +80	×	○	○	×	○
L	-40~ +85	×	○	○	×	△

○:Standard △:Available (case by case) ×:Not available

ELECTRICAL SPECIFICATION

Parameter	Min.		Max.		Unit
	5.0	3.3	5.0	3.3	
Supply Voltage Variation(V _{DD}) 5%	4.75	3.13	5.25	3.47	V
Frequency Range	2.5		45		MHz
Operating Temp. Range	Refer to Ordering Information				°C
Frequency Stability *	Refer to Ordering Information				ppm
Frequency Stability					
Vs Supply Voltage (±5%) change	-		±3		ppm
Vs Load (±10%) change	-		±3		
Vs Aging	-		±1		ppm/ year
Pulling Range	±60	±60	±400	±120	ppm
Control Voltage Range	0.5	0.3	4.5	3.0	V
Supply Current					
2.5000MHz ≤ Fo < 10.000MHz	-		15	12	mA
10.000MHz ≤ Fo < 15.000MHz	-		22	20	
15.000MHz ≤ Fo < 26.000MHz	-		30	28	
26.000MHz ≤ Fo < 45.000MHz	-		35	33	
Output Level (TTL/CMOS)					
Output High (Logic "1")	90% V _{DD} or 2.4V		-		V
Output Low (Logic "0")	-		10% V _{DD} or 0.4V		
Duty	40%		60%		
Linearity					
Pulling Range ≤ 100ppm	-		10		%
Pulling Range > 100ppm	-		20	-	
Modulation Bandwidth (BW)	10		-		KHz
V _c Input Impedance	50		-		KΩ
Start Time	-		2		mSec
Storage Temp. Range	-55		125		°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

* Inclusive of calibration @ 25°C, operating temperature range, input voltage variation, load variation, aging, shock, and vibration.